

CMDR Monograph Series No. - 14

**RESEARCH ECONOMICS OF EDUCATION:
A THEMATIC TREND REPORT**

Dr. P.R. Panchamukhi.

CENTRE FOR MULTI-DISCIPLINARY DEVELOPMENT RESEARCH

Jubilee Circle, DHARWAD-580001, Karnataka, India

Ph : 091-0836-447639, Fax : 447627

E-mail : cmdr@bgl.vsnl.net.in

RESEARCH IN ECONOMICS OF EDUCATION: A THEMATIC OVERVIEW

Dr. P.R. PANCHAMUKHI.

Economics of Education which developed as an offshoot of the interest of the economists and policy makers in the problems of economic development, appears to have got an unshakable place now in social sciences as an important component deserving the attention of the researchers and policy makers. A number of issues relating to the economic aspects of education have emerged in the course of the research studies. These issues have gone beyond the initial themes of economics of education which related to the problems of costs, financing and returns to education. The new issues which have attracted the attention of the researchers in social sciences relate to the diverse themes such as wastage and stagnation, economics of studies by the foreign students in India, brain drain, problems of educated unemployment, economic dimensions of different methodologies of transmitting knowledge to students, distributional issues concerning the questions of access to and utilisation of the educational opportunities education and economic reforms, etc. Inter sectoral perspectives about education and other sectors of the

economy have further enriched the social science perspectives on education.

At this stage of the development of the interest of the social scientists in education one feels extremely encouraged from the fact that education has no longer a restricted scope now, as the concern of pedagogy and pure educationists *per se*. On the other hand, the recent developments in the researches on education have also made the terms of such sub-disciplines as economics of education, sociology of education, Politics of education etc., as misnomers. This is because no research study on education can be put under a water tight compartment of these sub disciplines. In other words, one cannot visualize a study in economics of education *per se* without sociological and political perspectives. Similarly, a good study in sociology of education cannot be divested of the consideration of the economic and political dimensions involved. With such confessions we have to consider the studies on economics of education. In the present trend report on economics of education, we wish to consider some of the recently completed studies, on various

aspects of education if they have some reference to the socio-economic dimensions of education or which have some focus on economic aspects. Our approach would be relatively more liberal in including the studies under this trend report rather than excluding them in recognition of the interdependencies of different aspects of education. Such an approach, it is believed, is likely to be more rewarding even for a student of the narrow concerns of 'pure' economics of education' itself.

From a quick look at the studies undertaken in India on social science perspectives, particularly 'economics of education', one finds that most of the studies are largely empirical in nature. The conceptual and rigorous theoretical studies in economics of education are missing. It is in this sense that we feel that the discipline of economics of education as developed so far through the reviewed studies in India has a long way to go in terms of strengthening of the rigorous conceptual foundations of the discipline.

A qualification needs to be added here. The thematic review below is based upon only the studies completed mostly in the University system by the students for their degrees. The above observations would therefore be applicable only to those studies. Only occasionally, few other studies have been reviewed under

different themes. The plan of the overview would be,

- a) raise the conceptual issues relating to the theme,
- b) present critical thematic review of the available studies in brief in this general background, and.
- c) suggest researchable areas for future work in the background of the existing state of knowledge.

The themes considered are:

- 1) Inter linkages between education and socio-economic variables.
- 2) Problems of Inequality in Education: The Economic Dimensions.
- 3) Issues in Educational planning
- 4) Problems in Educational finance.

I. INTER LINKAGES BETWEEN EDUCATION AND SOCIO-ECONOMIC VARIABLES

That education has several economic dimensions was recognized by the thinkers in India since long, For example the eminent sanskrit poet Bhartrahari (of 10-11th century AD ?) termed education as indestructible wealth having significant use value and exchange value. It is only during the period after 1930's, or more specifically, after 1960's that economics of education as a

discipline was 'born'. Series of studies on estimating the economic value of education strengthened the foundations of this new discipline. The reciprocal linkages between economic variables and education also widened the scope of the discipline. Still later, the simultaneous interactions between the effects of socio-economic variables and educational variables came to be considered in some of the technical studies (Simultaneous equations model developed by Wheeler in the World Bank papers can be cited as an example). In India, in recent years, such direct and reciprocal linkages between socio-economic and educational variables have been examined in a number of empirical studies. The studies are rich in their perspectives, covering several subtle aspects of these linkages. We propose to attempt a thematic review of the *recent studies* highlighting the effects of education on socio-economic variables first, as, that is how the literature in economics of education seems to have developed. After such a thematic view, we propose to review the recent studies focusing on the effects of socio-economic variables on education. Overlaps cannot be avoided for obvious reasons. The studies focusing on the socio-economic aspects of wastage and stagnation have been chosen for a special review in view of the crucial significance of wastage and stagnation in achieving the goals of UEE and Education for all.

I.A: EFFECTS OF EDUCATION ON SOCIO-ECNOMIC AND DEMOGRAPHIC VARIABLES:

That education has significant influences on economic status of the individual and the family and the productivity of the entire economy has been the subject matter of a number of rate of return studies which were part of the first generation contributions in economics of education. A number of questions are faced by the researchers in this connection. Some of the major questions are outlined below.

Major Issues:

- 1) What is the mechanism through which education influences the economic variables ? Does education directly influence the productivity of the individual and the productivity of the economy as a whole ? What type and level of education would have the favourable effects on the economic wel-being of the individual and of the country as a whole ? In other words, is it possible to identify the critical minimum effort of education for realising the economic gains ?
- 2) Are the benefits from education for the individual consistent with the benefits for the economy as a whole, or if they are not consistent what are

the factors responsible for this inconsistency?

- 3) How does education intervene as an important determinant of the demographic variables? Is it possible to manoeuvre education to realise the goals with respect to the demographic variables?

The Studies:

The studies under review do not touch upon all the above problems. Unfortunately, very few, rigorous studies are undertaken by the researchers in economics in different universities and institutions on some of the above issues.

The rates of returns studies which are still popular with students of economics of education have their own limitations. (*P.R. Panchamukhi, NIEPA Journal*) The empirical testing of the rate of return approach to allocation of resources in education and also a number of conceptual problems in considering education as an agent for capital formation in human beings have been succinctly outlined in a number of studies brought out in a volume edited by Dr. V.N.Kothari (1991). Such studies were attempted for different communities, gender groups, states etc., Some of the studies also examined the relevance of education for improvement in agricultural sector.

A study of education of women in a developing state of Orissa (*Sailabala*

Debi 1992) showed that the rates of return to women's education are lower than those of men's education. In some cases, in view of the high wastage and stagnation for women, the rates of return to education for them were even negative. In the context of a backward socio-economic environment any improvement in family income is found to lead to, preference for education of male members in the family to that of the female members. This is a somewhat strange and interesting result. If resources are not adequately allocated for women's education then the rates of returns for women's education should be even higher than those for men's education, implying that there is under investment in women's education. The low rates of return for women's education as obtained in the case of Orissa, however, have to be interpreted in terms of the overall low rates of return for education for both men and women. This also may suggest that the rates of return for education cannot be considered as a dependable guideline for policy making in resource allocation!

More than the rates of return to education women's education depends very much upon educational level of the parents themselves.

Which type of education is likely to be crucial for socio-economic upliftment?

Does education influence the attitudes towards family planning and small

family norm? This question in a limited way was examined in the context of adult education programmes in Punjab. (*H. Sodhi 1992*). On the basis of 628 rural adult families of Punjab from 32 adult education centres it was found that participation in adult education programme positively influences the attitude towards small family norm. It is interesting that neither the size of the family nor the socio-economic status of the members had significant effects on the attitudes towards small family norm, except through an interaction effect on such an attitude. The adult education of rural women in the age group of 15 - 35 was found to have positive effect on such an attitude. In another study for Punjab (*T.S. Sodhi and M.N. Singh 1990*) it was found that education does intervene in a significant way to alter the responses of the scheduled caste members in rural and urban areas so far as their attitude towards the population problems are concerned. Thus, education is found to be more effective in an urban environment than in a rural environment. Can we in other words, say that it is the success which succeeds so far as the effect of education on demographic variables is concerned?

A clearer evidences of the role of education for improvement in income was presented in a study for Andhra Pradesh (*C. Chandra Reddy 1988*) using the data for 1150 farmers drawn from various educational and cultural backgrounds

from the two districts of Mehboobnagar and Medhok of Andhra Pradesh. It was found that education of the farmers and their agricultural income are highly positively co-related. The modus operandi of the influence of education on farmers 'income is through the farmers' exposure to mass media programmes, which educate them about different aspects of the agricultural activities. In an earlier study for Punjab & Haryana wheat belt, (*D.P. Choudari 1968*) it was shown that stipulated number of years of formal schooling for the farmers is always advantageous. The present study (*Chandra Reddy*) also showed that there is a positive relationship between the degree of exposure of the farmers to mass media - extension education, and their agricultural income. From these results the study suggests that suitable extension programmes for the farmers need to be organised, so that the agricultural income improves further. Though the study uses some of the simple statistical techniques (the co-relation co-efficient) it appears that the vast data for 1150 farmers collected by the researcher has not been fully used for developing a more rigorous study of the linkages between education and agricultural income.

Such sectoral studies of estimating the effects of education on economic variables are not many though there are several studies using the earnings data of general population and linking them with

education data. One such sectoral studies for few firms in electrical and electronic industry in a city concluded that the social rates of return to education are fairly high in this industry (V.N.Hebbare-1989)

A SOURCE OF MISPLACED PRIORITIES ?

From the above brief review we are back in the question raising mode. Have researchers overacted in emphasizing the economic value of education neglecting the primary functions that education is expected to perform ? It is time now that researchers have to attempt such a self introspection. Some of the rigorous studies in the literature (V.N.Kothari-Ed. 1991) have raised such questions showing that income and the rates of return are a function of several variables like labour market conditions, social background, native intelligence, occupation, industry etc and not just education. Many more such multi- variate analytical studies are needed to prevent over stress of only the economic dimensions of education.

I-B: EFFECTS OF SOCIO-ECONOMIC FACTORS ON EDUCATION:

The studies in Economics of Education have focused on the importance of education for socio-economic status. The reciprocal linkage between the socio-economic status and education is also

equally important. Some of the first generation studies in this field tried to show how in the low income countries educational development is likely to be neglected. In a micro level setting the less advanced social status was also found to be related with lower educational status of the individual. Educational backwardness of the scheduled caste and scheduled tribe population brought out by a number of studies is illustrative of such a linkage. In the same way, the educational backwardness of the blacks in the United states, of the economically less developed countries in the African sub continent are taken as the cases of evidence of such a correlation between the socio- economic status on the one hand and educational development on the other.

Major Questions:

A number of questions can be raised in this context. In what way the socio-economic factors influence the different aspects of the process of educational attainment? In other words, do they influence the choice of the courses in education ? Do they affect the occupational preferences of the students while they are still in the process of education ? Does SES affect the achievement motivation of the students ? In what way are the socio-economic status and scholastic achievements related ? What do we mean by the *socio-economic status* which intervenes in

different aspects of education ? Is it possible to identify the variables under SES which can be considered as policy variables i.e. manoverable, in order to influence different aspects of education ? What percentage of the variables under SES can be so considered as manouverable and what percentage are beyond the control of the policy making ? How strong are the former group of variables as compared to the latter group ? Thus, there are several conceptual and empirical questions which need to be analysed while examining a flow of causation from the socio-economic status to education.

Materialistic Interpretation of Education ?

Unfortunately, the studies that are available in this field are mostly empirical in nature without giving a semblance of trying to develop a body of theory or conceptual insights into the effects of socio-economic variables on education. The studies also appear to be somewhat mechanical in terms of methodology and the direction in which the generalizations are drawn.

Most of the studies which try to examine this type of linkages are mostly based upon the data for different levels of education (standards) derived from adhoc field investigations. The studies on socio-economic and familial correlates of *achievements* (P.Usha 1991, Vinita

Trivedi-1988, N.Sahay-1991, R.Ramaswamy-1988, R.Muthumanicam-1992, Indra -1991, Harikrishnan- 1992, Garg-1992, M.Ganguli-1989, P.Paul Devaneshan-1990) show that the socio-economic conditions of the family are fairly closely associated with the academic achievements of the children whichever be the level of education that we consider. For girls this correlation is found to be closer. That is why the poor families are discouraged from sending their girl children to schools and higher education. While there are many factors like personality, achievement motivation, self concept, study habits, etc., which contribute to the scholastic achievements, the role of socio-economic status cannot be considered to be insignificant. In fact, all these other aspects are also likely to be dependent upon the socio economic status itself.

Such a meterialistic interpretation of educational achievements may be frowned upon in the conventional context of achievement being considered dependant upon only native intelligence and 'pure' education. Even the commitment of the students to the scholastic pursuits was found to be closely associated with the economic status. One of the studies (C.M. Yeole -1990) concluded on the basis of a study of 500 adolescent students from higher secondary institutions in Kolhapur city that eve teasing, gangstering, bunking of the class etc. were more prevelent among students which came from richer families!

It was less prevalent among the children coming from poorer families. There is however, a sense of purposelessness in the pursuit of their education for many children from the poor families in particular. Under-achievement was found to be prevalent more among boys rather than girls, among rural students, among backward caste students and among upper age group students as compared to the others (D Seethamoni- 1988). This shows that the socio-economic status which is relevant for educational achievements is a highly complex phenomenon. Several types of permutations and combinations among different socio-economic variables are possible, each permutation and combination indicating one type of socio-economic status. One can understand in this context why some of the studies in this field have even questioned the relevance of socio-economic status for educational achievements. The various scales of socio-economic status construct by scholars in this field so far can be considered as different possibilities implying that there is much scope for further refinement of the concept itself. A study for Aligarh district for example (Anil Saraswat 1988) concludes that it is the school environmental factors which are more important than the socio-economic background factors for the students so far as the academic achievements of adolescents in different types of school climate are concerned. The achievement

motivation is found to be a major factor in determining the scholastic achievement of the students even without the influence of the socio-economic status according to another study (P.Paul Devanesan 1990).

Wherever the socio economic status factors are found to be playing a significant role in determining scholastic achievements, efforts may have to be made to alter them to facilitate better scholastic achievements.

The socio-economic status, educational aspirations, scholastic achievements, value formation, etc., function under a mutually reinforcing mechanism. For example, the vocational choices of higher secondary students were found to be independent of their socio-economic status according to one study (Robert and Pankajam 1988). According to another study (Laxmi Srivatsva 1988) vocational development is related to academic achievements and socio-economic status but not to gender and different levels of education.

Education is found to alienate the students from their moorings and develop different sets of values. For example, irrespective of the socio-economic status, the students are found to be having negative attitude towards manual job (P.Subramanyan 1990). Education itself has a tendency to take away the children from their familial backgrounds,

(*B.P.Varma and R.L.Nayak -1990*). Socio-economic status was also not found to be significant in its effect on the learning styles of the students (*B.P.Varma, Asha Tiku 1990*). Though there are not many studies on the mechanism of how the socio-economic factors influence educational achievements, general insights can be derived from some of the studies about this issue. For example, socio-economic status could influence mother's reactions towards children's behaviour. If this reaction is positive then children may develop achievement motivation. However, in the families with lower socio-economic status, the mother's reaction to the behaviour of children of pre-school age was not very much positive (*G.Srilatha 1988*). The socio-economic status may also determine preferences of the parents for different categories of schools. For example, parents with better socio-economic backgrounds are found to prefer unaided pre-primary schools to aided pre-primary schools, not only because the former provide better physical facilities in the place of learning but also because the un-aided pre- primary schools are used a good as screening device at entry points (*R.Sharma 1992*).

Never to be conclusive ?

The upshot of these various studies under this broad theme of flow of causation from socio-economic status to education is that the studies are not

conclusive. The materialistic interpretation of educational development has yet to take firm roots as a bases for policy making in a country like India. The studies done for the Coleman Committee in the United States on the question of socio-economic background and education had methodologically stronger foundations and hence they could have a higher degree of acceptability. So far as the studies in India are concerned, it may be observed that they have a wider coverage in terms of considerations of different aspects of the problem, but have lesser depths in terms of their methodological strengths. In such a background, the results cannot be considered to be conclusive. This is evident from the precisely contradictory sets of conclusions from the various empirical studies undertaken with different regional data.

I. C ECONOMIC ASPECTS OF WASTAGE AND STAGNATION IN EDUCATION

A number of studies on wastage and stagnation at different levels and different types of education attempt to bring out the importance of socio-economic factors in determining the wastage and stagnation.

The problem of wastage and stagnation obviously would have very significant socio-economic implications. In that, the social costs from wastage and

stagnation would be unbearable in the background of scarcity of the physical, financial manpower resources available for education in a developing country like India. The studies range from the analysis of the problem of the wastage and stagnation in the context of a given city to the state and groups of states in the country. A study (D.S. Chavare 1991) showed that even in an educationally advanced environment the drop out rates are fairly high. The drop out rates were high for those living in slums, and those who live below poverty line in which the daily wage workers are found. Wastage and stagnation is a major problem in educationally backward states, which also incidentally are economically backward, like Andhra Pradesh, Assam, Bihar, M.P., Orissa, Rajasthan, U.P., West Bengal, and Jammu & Kashmir. These rates are high for Scheduled Castes and Scheduled Tribes, for children from the families with low economic status, and for girls. (studies by J.K. Gupta, P.K. Rastogi and M.K. Gupta 1989, J.K. Gupta & A.B.L. Shrivastav 1989). About whether the rural environment is associated with higher wastage rate there is no agreement among the researchers. Eventhough majority of the studies reviewed here showed that in the rural areas the wastage rates are higher than in the urban areas (Jnaneshwar Singh 1992) a separate study for Rajasthan (J.C. Vyas and others 1992)

shows that the drop out rate in urban areas is more than in the schools of rural areas. Some of those studies also show that there is no significant relationship between physical facilities in the schools and the drop out rate contrary to a common belief. This is a startling conclusion (J.C. Vyas 1992) questioning even the basic premise of the operation blackboard measure. The parental perceptions, the student perceptions and teachers' perceptions about the causal factors for drop out among the school children by and large converge though the teachers have highlighted the specific factors of frequent transfers of teachers and large family size illiteracy of parents etc as the basic causes (B.S. Yadav 1991) it has been also shown that even absenteeism and regularity in attendance of the children, which may ultimately influence the academic achievement, are closely associated with the socio-economic background of the children. A study for U.P. (G.S. Rawat 1987) shows that the drop out rate for children coming from the higher socio-economic status is relatively higher than for children coming from lower economic status: This indicates the negative effect of better economic conditions on attendance of the children. Normally, wherever the economic compulsions are great children drop out to make good the economic deficiencies. Another study for secondary school students showed that for the girls drop out rate is higher than

for boys as the girls are required for household work as per prevailing practices. That the economic compulsions are the causes for dropping out may also be indicated by the occupational preferences of the dropped out children (M.K. Pathy 1990). Such preferences were quite different from those of others. The dropped out children preferred the clerical jobs in the employment market. In the urban areas occupational aspiration of the dropped out children were somewhat better than in rural areas. The studies also showed that the dropped out children from the urban areas were found to be less intelligent than those who continued in their education. In the rural areas the dropped out children were found to be more outgoing though less intelligent. (G.S. Nayal, S.Nayal 1989). While several socio-economic factors may be responsible for the problem of wastage and stagnation in education the pure educational factors also have some role to play in this. For example the detention system and drop out rate are found to be much more closely associated than the socio-economic background factors and the drop out rate (Venkatrama Reddy 1989).

What do the droppedout children do? What are their economic aspirations? Do they wish to continue their education under the non formal system? These are some of the issues which may bother

the policy makers. It is found that there is no smooth sail over from formal to the non formal system for the dropped out children mainly because of the lack of proper facilities, absence of women teachers, distance of the non formal education centre from the place of the stay of children etc. (H.K. Gurao 1989)

From all these studies it seems clear that the socio-economic factors do play a role in determining whether the children continue their education or drop out. If it is possible to classify these socio-economic factors as those which are manouverable and those which are not then the studies would have a significant input for the policy makers. While drawing inferences about such matters care has to be taken not to disturb the other policy thrusts, Thus for achieving the objective of lower wastage and stagnation in education, improvement in the educational level of the parents or improvement in the appreciation of the value of education by the parents, improvement in their economic conditions, weakening of the taboo against girls education, provision of adequate facilities in the school system for boys and girls etc. may be suggested as the directions in which the intervension may be helpful. However, if the wastage rates are found to be high for rural areas as compared to urban areas the policy conclusion should not be in terms of

shifting of children from rural areas to the urban areas. The policy conclusion ought to be the provision of adequate facilities in rural areas which are comparable to those obtaining in urban areas.

II THE PROBLEMS OF INEQUALITY IN EDUCATION:

While we may appreciate that education intervenes in a significant way to improve the socio-economic status of the individual and of the society as a whole, in order that education performs this function effectively there ought to be equality in education. In actual practice we find that there are serious inequalities in the field of education. The problem of inequality can be considered under the following heads.

- a) Inequality in the distribution of the educational facilities.
- b) Inequalities in access to educational facilities.
- c) Inequalities in utilisation of these facilities.

All these three facets of inequalities which may be expressed in terms of inter regional inequalities or inter community group inequalities., inter gender inequalities, inter personal inequalities etc., would be a function of the socio economic factors. It has been found that a relatively less developed region in the country suffers from inadequacy of educational facilities as well.

Since the people in such less developed regions consider education as an item of low priority, the access to the educational facilities is not equal; for the same reason the educational opportunities are not equally and fully utilized by the people. In this sense, the role of education as an agent for economic improvement will not be realised at all in such regions. In the Indian context, the educational opportunities in the rural areas are found to be inadequate at all levels of education. The special educational reforms aimed at equality in the distribution of educational opportunities have not succeeded to the extent expected. (*P.R. Panchamukhi (Ed) 1989*) We are not reviewing all the studies pertaining to inequalities in education. Such a review is presented elsewhere in this volume on Research surveys. We would, however, consider only studies which emphasize economic aspects and also some of the measures to tackle educational inequalities. Two such measures are considered for a special review of their economic aspects,

- a) Non formal system and
- b) Measures based upon intere-sectoral linkages.

II. A. INEQUALITIES IN EDUCATION: Undisputed Conclusion.

Inter regional inequalities, inter community, inter-caste group, inter-personal inequalities etc., in education

would have significant implications for socio-economic status of the individual. India presents a polar case model consisting of high degree of access to and utilization of educational opportunities and also high level of internal and external efficiency of educational system at one end and very low degrees of access to and utilization of educational opportunities and also low levels of internal and external efficiency, on the other. While there is a state of Kerala with high levels of achievements; there are also the educationally backward states like Rajasthan, Bihar and Orissa.

Even in a less developed state the extreme *intra-regional* inequalities are observed. In the case of Orissa for example (*R.Mahapatra 1988*) the inter district inequalities are fairly high. In the tribal districts of the state the educational facilities are not satisfactory at all. Even over a period of time the improvements in the facilities in such districts is not still quite up to the mark. Several factors contribute to such inter-regional and intra-regional inequalities in education. The deprivation of different communities and regions and sub- regions are multi-dimensional; the pace of development is uneven, the resources are scarce and educational planning exercise is almost non-existent and it is also ineffective in actual practice. That educational backwardness of Orissa is also due to less allocation of resources to education

is brought out in another study (*C.Sahoo-1990*) Per-capita expenditure on education in the state of Orissa was lowest in the country on the eve of the first plan. The per-capita expenditure continues to be low even there after. This also shows that there is no concerted effort to develop education in a planned way in the state.

While it is true that educational institution is a replica of the society reflecting all types of stratifications that are witnessed in the Indian society, each individual educational institution seems to be designed to cater to different socio-economic groups of the society. Schools catering to children from different socio-economic strata are found to offer facilities that are different and disparate. Hence, they in turn create further inequalities in the society. For example IITs and the management institute normally cater to the students from the upper echelons of the society. There are innumerable arts and sciences colleges in the country catering to the needs of the children from lower socio-economic strata. The public school vs the non-public differentiation is too well known which would perpetuate and strengthen the prevailing elitism in the society. A study of three schools belonging to three socio-economic strata of the society from Bombay (*R.S.Britto 1988*) clearly brought out the positive relationship between the class to which a school caters on the one hand, and the

academic performance of the students, physical facilities available, home support to education etc., on the other. Since social backwardness and economic backwardness seem to be converging in the society, the improvements in the economic status realised through different policy interventions might be the suggested policy implications of such studies for over-coming the educational inequalities. Educational inequalities are found not only as between different communities, they are found also within a specific community. In fact, the intra-caste and community inequalities are found to be more severe than the inter-caste and community inequalities. (*G.Chinnappan 1987*). Problems of income distribution can be tackled by providing equal educational opportunities, other things remaining the same. In the case of the muslims for example, the educational inequalities are found to be grave. Particularly with regard to the girls among the Muslims the educational inequalities have been quite large in view of the social customs, lack of adequate facilities (say the neighbourhood schools), low economic status etc. (*S.K.Awasthi 1992*). Certain socio-economic measures have been suggested by some researchers to improve the situation. A study of 960 students from Kumaun University (*A.R.Bisht - 1990*) showed that the socio-economic status and the vocational stress are negatively related and hence the reservation policy in employment should

be based on the socio-economic status of the individual. Even in the process of education different aspects depend very much upon the economic conditions of the students. The policy measures for overcoming the educational inequalities may consist of those aimed at socio-economic improvement. Since income and language ability are found to be positively related (*C.B.Devi 1991*) it follows that measures to improve the parental income would lead to improvements in the language ability to the deprived children. Interventions can also be thought of from the side of education itself. For example special schooling facilities for the deprived children, employed children (as the study by A.J.Yadav outlining educational measures with regard to the Hotel workers in Kolhapur district shows) muslim girls in general and girls from the socio-economically backward communities in particular, tribals etc. The Ashrama School Reform and the neighbourhood school reform suggested by the Education Commission, (1964-66) supplementary teaching aides for the deprived children etc., can be considered as useful interventions from within education to overcome the educational inequalities. In other words, issues of social deprivation and poverty issues can be integrated in educational policy so that the socio-economic hindrances for educational development are suitably handled. (*P.R.Panchamukhi 1990*)

II. B. SELECTED MEASURES TO TACKLE INEQUALITIES

When different types of inequalities exist, it implies the principles of equal treatment of equals leading to horizontal equality and of unequal treatment of unequals leading to vertical equality are flouted in actual practice. In a country with many levels of socio-economic stratification the principle of unequal treatment of unequals would be extremely necessary. In this sense, the educational opportunities for different categories of population will have to be necessarily different. The non formal education, distance education, or open learning system would be one such reform for tackling problems of socio- economic inequality and the problem of educational inequalities.

II.C. NON FORMAL EDUCATION AS AN EQUALITY REFORM : ECONOMIC ASPECTS

Most of the studies in Economics of Education focus primarily on formal education. However the educational activities take place through different methodologies. We may classify the educational activities in the following channels out of which some methods may be useful for tackling the problems of inequalities.

- (a) Informal Education at home through the parents and the members of the family.
- (b) Informal Education through the peer

group in interactions. and

- (c) Informal Education through interactions in the society and the work place.

As against the above categories of informal education there are following categories of formal education and training.

- (a) Formal Education through the school system
- (b) Formal Education through organised programmes on the job. and
- (c) Formal Education in armed services.

In addition to the above informal and formal channels of education usefulness of non formal education channel also needs to be appreciated. This channel is in a sense, combination of the main features of informal and formal channels with characteristic flexibility. The non-formal primary education classes, non-formal adult education programmes, non-formal distance learning schemes which have a linkage with the formal system etc., may be considered under this category.

INFORMAL CHANNELS:

Just as in the case of the formal system, the socio-economic methods would play their role with regard to all the above aspects. For example, in the non-formal channels of education there is an opportunity cost of time of the trainer while he or she is transmitting some knowledge to the children or members of

the relevant group. Where resources for informal education are available in plenty, there is likely to be a less burden on the formal system and also on the non-formal system. The informal channel was emphasized in Indian indigenous system of education. Even though the thrust of the indigenous system has disappeared the system still has left its important components in the educational system as a whole. The institution of the family, the institution of the peer group (friends' circle, informal societies, debating societies, Open intellectual competitions etc.) can all be considered as the vehicles for informal education having significant socio-economic implications. With the mass media becoming more and more crucial in transmitting information (say, through the quiz programmes) the informal channel has become obviously a very crucial component of the educational system. With the term education being defined in an eclectic sense, the developments in the job market in terms of, say, introducing its own system of screening, and not depending upon the degree certificates from the formal system, the role of the informal channel of education has assumed an added importance. Thus a boy or a girl who is better informed through the informal channel of education is likely to stand a better channel in the job market so far as the employment opportunities, opportunities for improvement in the rewords and working conditions etc., are concerned.

Unfortunately these aspects of economics of informal education have not received any education by researchers in the studies covered under the trend report. This may suggest an area of tremendous research potentials for the researchers in the future.

NON-FORMAL CHANNEL:

So far as non-formal channel of education is concerned some studies have been conducted dealing with the economic aspects of open learning system, adult education, non-formal education, etc. These studies can be grouped under two categories:

- a) The studies bringing out the role of the socio-economic factors in the success of these alternative education programme in general and the performance of the participants in the education programme in particular.
- b) The studies outlining the effect of these programmes on the socio-economic conditions of the participants as well as the region in which the participants are living.

II.D Questions about Open learning System and Non-formal methods:

There are a number of questions which are faced in connection with distance education or open learning system. The questions are :

- a) Are open learning system and non formal methods equally resource efficient and comparable with the regular system of education , in terms of the educational outputs ?
- b) Is open learning system more cost effective as compared to the regular system ?
- c) What are the problems of financing of open learning system ?
- d) How have the different methods of open learning system like correspondence courses, and the use of mass media (particularly the electronic media) been effective in respect of different levels of education and for different types of education (science education, vocational education liberal education etc.) ?
- e) The experiments in different states and regions of the country (rural and urban) fared ? In other words, is distance education successful only in the advanced regions and not in the less advanced regions ?

1989). The average per student cost of distance education was found to be 15-25 per cent of the cost of the formal system. As a result, the universities offering correspondence courses were found to have revenue surpluses on account of the correspondance course programme. It is interesting that despite the apparent cost effectiveness of distance education the returns from distance education are necessarily spread over a period of fewer years as compared to the formal system of higher education. This is because, the students taking to distance education courses are relatively older in age as compared to the students in the regular system. Considering such a difference in the student composition for two systems of education the cost effectiveness of distance education appears to be doubtful. In any case the low economic cost of educational delivery system alone should not be the sole criterion for promoting alternative system of education. In a study of distance learning system for B.Ed., level (*Renu Goutam 1990*). It was found that the institutional variables contribute positively to the success of distance learning. It was also found that distance learning was equally effective compared to regular system. Similar questions were raised with regard to the financing of INGOU (*Mrudula 1991*) it was noticed that there are such a system is more equitable. The specific regional studies do not alter the

II.E. THE STUDIES:

The studies in this field under review have covered some of these aspects. A review of the facilities for distance education at the higher level has found that the facilities are unevenly distributed in the country (*M.M. Anasari*

thrust of the above conclusions. The study for Rajasthan, for example (M.L. Gupta 1988) shows that per capita costs of correspondance education are about less than 1/3 of the regular system of education. The per capita costs at the under graduate level are, however, double the costs at colleges, though at the post graduate level the costs are almost 1/10 of the costs at the University Departments.

Some studies have revealed that the correspondance courses are not managed quite efficiently, because the income from correspondance courses at least for Rajasthan was found rising less fast as compared to the expenditures. The overall expenditures have risen five times in just 12 years. The Parkinsons law seems to be applying quite vigorously in the case of the correspondance courses as the administrative expenditures (expenditures on establishment) constituted a major percentage of the total expenditure and they are also found to be rising faster than the expenditures on the typical educational heads like teachers' salaries, expenditures on books and journals etc. It was intriguing that the latter type of expenditures were found to be declining over the period of time. On the whole, though the correspondance education in particular and distance education in general are taking firm roots in the Indian educational system their receptivity does not seem to be very high. Students still have a differential valuation

of open learning system as compared to the regular system. Further, there have been no significant experiments of open learning system at the school level. There are a number of aspects of open learning system which have not received the attention of the researchers in the field. Obviously, this area should provide interesting opportunities for economists to probe further into the socio economic aspects of this alternative system to the formal system.

The non formal education programmes through electronic media has been found to be effective so far as working children are concerned. From a study of 60 working children in Andhar Pradesh (J.P. Basker and S. Thangasamy 1990) it was noticed that the economically deprived children who were working, could improve their economic conditions and also could take good advantages of the social awareness programmes through the video lessons.

The other alternative method tried for formulations of improving the access to skills and knowledge for those who were deprived of the participation in the regular system are polyvalent education for industrial workers. Based upon a study of 400 workers, 30 functionaries, and a number of policy makers, resources persons, boards of management etc. (

R. Bagria 1991) in Delhi and Chandigarh it was found that workers do get significant advantages from Shramik vidyapeeths which were disseminating specific aspects of education. It was also found that while all methods of education have been essentially spending activities Shramik Vidyapeeths have been able to mobilize additional resources through their own efforts.

Thus, the non formal education has been rightly suggested as an alternative system for the regular system in a country with extreme socio economic inequalities. More rigorous efforts, however need to be made, to make this alternative system more effective. It has been found from the studies that there have been a number of drop outs (*Janardhan Reddy 1991*) from the system and also the job satisfaction for the trainers is also not uniformly high. (*Subba Reddy 1991*). Many factors are responsible for the varying levels of job satisfaction.

From the survey of the studies in the field of open learning system we may notice that the socio-economic factors are quite significant in determining the degree of effectiveness of these methods of education.

II. F. ADULT EDUCATION PROGRAMME AS AN EQUITY MEASURE:

A study for A.P. (*M.C. Reddappa Reddy - 1988*) showed that out of the 41

predictor variables used in explaining the variations in literacy rates 29 variables were found to be quite significant in explaining the variations in the literacy levels. The multiple regression models used here, were also found to be dependable in estimating the quantitative significance of different variables. Some of the socio-economic and demographic variables therein were also considered to be quite important. An earlier study by Maya Shah (Baroda University) also highlights the importance of the socio-economic conditions of the region and the learners in explaining the literacy levels. Such studies would obviously provide insights about how the adult education programme can be made more effective by operating on the various socio-economic determinants of the literacy levels.

A micro perspective about the importance of the socio-economic variables would be further useful in making the adult education programme successful. A study for Kerala (*V.Pushpakumar-1992*) based upon a sample of 600 women consisting of 300 urban and 300 rural women learners from 20 out of 60 centres of adult education, surprisingly shows that income generating activities provided at the Centre as such do not play a decisive role in motivating the women learners of the adult education centres in Kerala. It is true that the psychological and sociological factors have a role in

motivating women learners in adult education. However, such conclusions have to be taken with care, because, motivation may depend upon the type of income generating activities, the amount of income from these activities, location of these activities, distance of the activities from residence etc. The conclusion seems to be somewhat similar to that of the studies on the rate of return from different levels of formal education. Despite higher rate of return from primary education (calculated on the basis of the life time earnings of the completers of education) primary education has not become a very attractive proposition !

How far has adult education itself contributed to improvement in the socio-economic conditions of the individual and of the society. Some studies in this field have brought out mixed results. Findings from a study for Azamgarh district (U.P.) (*S.N.Pathak-1991*) showed that in spite of the implementation of the adult education programmes in the district the people could not find the programme to be socio-economically very advantageous. Another study for U.P. itself (for rural areas of Allahabad district) (*B.Sharma-1990*) showed that adult education benefited the adult learners in their marketing activity, aroused them against the social problems like dowry system etc. A study on social uplift of womens in rural areas of Madhya Pradesh

(*Gopirao 1992*) showed that adult education did bring about a significant improvement in the social, economic, heyigenic aspects in the life of adult women learners.

The studies on adult education programme seem to emphasize a common point namely that the programme has not been seriously implemented A study of the cost effectiveness of national adult education programme during the 7th five year plan (*NPS Chandel- 1992*) showed that the cost of SAEP and RFLP was Rs.168.36 and Rs.166.87 respectively. The wastage rates in these programmes was around 8.4 and 9.7 percent respectively. Cost effectiveness was found to be higher for the male learners as compared to the female learners. Similarly, for the rural areas also the functional literacy programme was not found to be highly cost effective. A study for Assam (*Manoranjan Das- 1990*) showed that besides poverty there are many social and other obstacles like social customs, religious finaticism, natural calamities etc., in the expansion of adult education. The study emphasized a need based adult education programme for the socially and economically deprived sections of the society.

On the whole, it appears that the research literature on economics of non-formal education has not developed significantly in the literature on Economics of Education. A Few studies on distance

education showed that there are many research opportunities for social scientists in this area with a number of distance education exercises being implemented in different parts of the country. Studies on costing, financing, returns and planning of distance education programmes need to be undertaken. It is also necessary to look into what may be the cross linkages between distance education and the regular formal system of education. Such studies would help proper coordination and integration of the two channels of education.

II G. INTER SECTORAL LINKAGES :

A saying-healthy mind in a healthy body summarizes the importance of the inter-sectoral linkages, which are relevant for education. Economic-factors play a role of intervening variables between education on the one hand sectoral variables on the other. If less resources are allocated to the development of the other sectors then achievements on the educational front would also be less. It is in this sense that the inter sectoral linkages need to be considered in any study pertaining to planning of educational development.

That health and education are symbiotically related has been effectively brought out in some of the studies undertaken recently. Some of the health practices would therefore be related with

education in a significant way. An interesting conclusion has been reached in a study (*Sister Amanda 1991*) that the children who were breast fed for more than four months were found possessing better mental abilities than those who were either artificially fed or breast fed for less than four months. It is of course, necessary to have longitudinal studies in order to follow up the performance of different categories of children in their educational career in the future in order to evaluate objectively any particular type of health practice. Another study based upon the data from a random sample of 30 schools from among the 100 project schools identified in seven selected states (Bihar, Karnataka, Maharashtra, Misoram, Orissa, Rajasthan and U.P), found that the scholastic achievements were different for the children who benefitted from the nutritional project in these states. In a background of severe nutritional deficiencies obtaining among children in India this conclusion should be very meaningful, for both educational policy making and the policy making in the health sector. Unfortunately even though the funds were quite adequately supplied for nutrition programmes the utilization rates were not very satisfactory (*S. Bhattacharrya 1991*). It should be added however that the evaluation studies of mid day meals programmes for school children are not unanimous in their conclusion with regard to the nature of association between the nutritional input

and the scholastic achievement. In the background of the fact that more than 50 percent of children are undernourished (*M. Verghese 1991*) the school nutrition programme should be useful in itself. It is also noticed that enrollment and attendance (at least at the time when bread and milk under the nutrition scheme are distributed to children) improves.

While health inputs contribute to education, the educational programmes also do contribute to the achievement of health goals. Different aspects of mobilizing education to reinforce primary health care through school children has been highlighted in another study (*R.S. Potdar 1989*). In this sense, school can be considered as a change agent to facilitate reaching goals of health for all by 2000 A.D.

These insights about the nature of the linkages between socio-economic factors on the one hand and education on the other and also other inter sectoral linkages reinforce the belief that education is only a subset in the overall social context. There is a need to have more rigorous studies highlighting such a symbiotic relationship between various other forces and education in the context of different levels of socio-economic development of the region and of the people. It appears that symbiotic relationship is stronger in the early stages of development and lower levels of

regional development. The degree of complementarity between the two is likely to be low, at higher stages of socio-economic development. Such stage-theoretic perspective about the nature of the linkages would be extremely helpful in both understanding the educational process and also the relevance of various policy instruments. Such unexplored areas offer many useful research opportunities in the future for both the social scientists and educationists.

III. ISSUES IN EDUCATIONAL PLANNING:

In the above background of usefulness of education for the economy and the society and the significance of the socio-economic forces for educational development, meaningful interventions can be visualised for the purpose of achieving the stipulated objectives. Care has to be taken to ensure that there is no inconsistency or conflict in the interventions in different sectors, different regions and in relation to different population groups. We may suggest in such a context an approach of developing a 'policy matrix' reinforcing the co-ordination and integration of different sectoral policies.

If only the problems of planning of education have to be focused upon then the conventional approaches of using rate of return techniques, manpower planning techniques or social demands estimation

techniques may have to be considered. We have already reviewed some of the studies estimating the rates of return. Unfortunately exhaustive studies of estimating social demands for education (estimating the requirements of educational facilities based upon the demographic development) have not been attempted by research scholars. While formulating the 8th five year plan for education a number of working groups appointed by the Government of India looked into such questions. One of the sub-groups examined the questions relating to estimating the financial requirements of educational facilities in the background of increase in population in different age groups and the transition probabilities and presented the estimated of resource needs. (*P.R.Panchamukhi, Chairman estimations of the committee 1989*). A number of sectoral studies brought out by the Institute of Applied Manpower Research can be considered to be useful inputs so far as manpower requirements estimation as a basis for educational planning is concerned. In another study the importance of Rural Manpower assessment was emphasised for the purpose of planning of education. (*R.Srivastav 1990*) A critical observer of the literature in this field however feels that there is much scope for undertaking rigorous technical studies

for different sectors of the economy estimating the manpower requirements of these sectors and integrating these estimates in the future educational planning.

One gets an impression that while there are a number of attempts to generate useful data of manpower requirements in different sectors they are hardly integrated with the planning exercise of educational development in the country. Obviously the studies will have to be developed with a bottom up methodology, with sub sectoral and regional exercise conducted initially which will then be coordinated to present a macro picture of the educational plan for the country as a whole. Obviously this exercise of estimation of the manpower requirements for different sectors and regions would be extremely complex, particularly, in the background of fast technological changes that are being witnessed in different sectors and different regions. With the rapid entry of foreign investments and foreign technology into the country the problems become all the more acute and complex, Such developments would also throw great challenges before the researchers in developing comprehensive educational plans based upon technically developed estimates of manpower requirements.

INSTITUTIONAL PLANNING :

In the above background of difficulties about macro level planning one needs to emphasize the importance of

planning at the institutional level. Such micro excersises would be quite meaningful from the point of view of efficient and economical use of the scarce financial, physical and manpower resources in the educational sector. This is the subject of internal efficiency of resource allocation. While wastage and stagnation indicate one aspect of internal efficiency of the educational system the institutional planning would refer to another aspect.

The main questions here are of the following type: How are the main questions here are of the following type: How are the available resources in the educational institutions actually utilised? Is there a problem about the building space in the educational institutions? Is the library properly located? What is the expenditure on reference collections in comparison with the expenditure on the text books ? What percentage of the resources should be allocated to the academic activities and what percentage for administration? Such question would touch upon the ground realities of actual functioning of the units in the educational sector.

A number of studies have been attempted to examine some of the above questions. Studies relating to the planning of the library facilities . (*M.M. Raju 1990* , *C.L. Kaul and J.K. Gupta 1990*) show that the library facilities are not quite

adequate in educational institutions at different levels. Neither the library accommodation is adequate nor the publications holdings is satisfactory. It has also been noticed that the library resources are also not fully utilized.

With regard to the school building also the conditions are far from satisfactory. The NCERT surveys have certainly brought out the facts about the conditions of the facilities within the school. Four state study covering 19 districts (*S.C. Mittal and P.Kumar 1990*) revealed that majority of schools run by the government do possess enough land but the per capita land covered area is very less 52 percent of the schools function in thatched and Kuchha accommodation . Such a state of affairs would go only to show that there is no proper planning of the building resources by the educational institutions

Ideally the exercises of planning at the institutional level have to be the basis for planning of education at the state and the national level. As one of the studies reveales (*J.C. Vyas 1992*) not all the educational institutions had prepared their educational plans and sent to the District Education Officers, and even at the level of the District Education officer, these plans were not properly integrated with the educational plan for the District as a whole. The same anomaly is seen with regard to the financial planning at the

institutional level and planning of the educational sector as a whole, for the state or the country. Thus, even though agriculture receives priority in the economic development of the state and the country, the same priority is not reflected in the actual decision making for the release of the resources to the different components of agricultural development. For example, the agricultural universities in Maharashtra could not get the required financial resources from the *government* (P.M. Mohitkar 1991) only 40 to 60 per cent of what the agricultural universities asked was received by way of grants in this state. The degree of utilization of the grants, by the universities however, was quite high-(around 99 per cent) ! A number of studies on Universities Finances which were attempted during the 80s clearly bring home the same point that the financial conditions of higher educational institutions are not sound and they are also deteriorating over time. Unfortunately, the researchers have not paid much attention to the analysis of the finances at the school level. It would be interesting if the finances of the private and government run primary schools, are analysed and the financial planning exercise at the institutional level is extended to the school sector of education. While there is so much of noise created about more allocation of funds to primary education, it is always useful and necessary to examine what is the financial strength of primary schools in order that they function efficiently.

Thus, very few studies on physical and financial planning of education, at the macro and micro levels show that there are many questions of planning which have remained unaddressed by the researchers in economics of education. Despite the recent trends of state withdrawal¹ from various economic sectors of the country, the state initiative in planning of education for the purpose of allocative efficiency and distributive equity cannot be overlooked. The research base for such initiatives needs to be strengthened in the future.

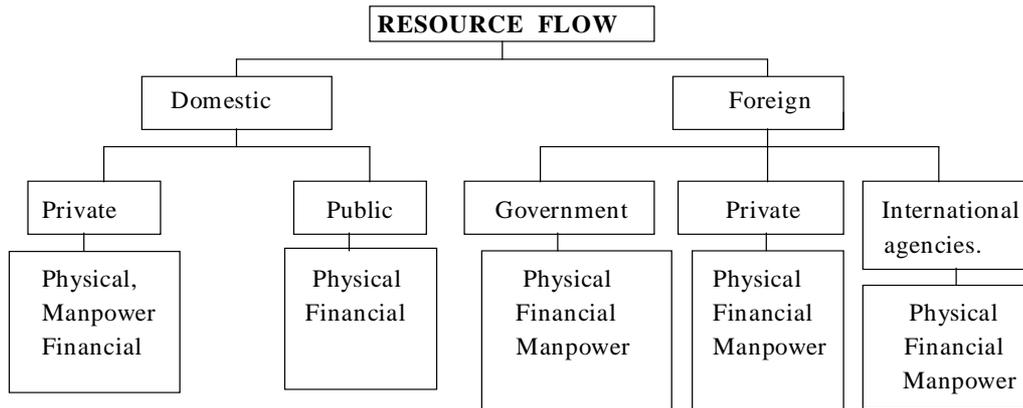
IV. PROBLEMS OF EDUCATIONAL FINANCE:

Educational finance has been one of the areas in which economists have taken keen interest for a long time. One of the earlier studies on history of educational finances (by Atmananda Misra) provided pioneering initiatives in the field. Studies on history of education (for example by Narulla and Naik) referred to the problems of educational finances as one of the crucial components of historical analysis of education. The subsequent studies with a focus on financing of education at different levels, funding of education, pricing of education etc. raised some of the crucial issues in this connection.

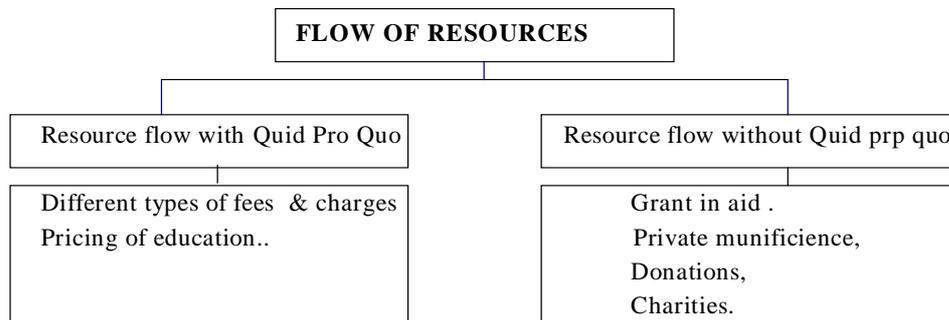
The question of educational finances has to be considered in a broader framework of the availability of the resources physical, financial and

manpower, for education. The resource flow for education can be shown in the following chart.

2) Is there “automatic stability” in the flow of resources within the given time period ? e.g. within a year do the



The flow of resources can also be seen from a different angle.



The main issues in connection with resources and finances for education would be the following.

1) Are the resource flows into education adequate so that growth and development of education is ensured without any hindrance ?

resource flow automatically whenever there is a greater need for them ?

3) Are the flows of resources having any strings, or any conditionalities ?

4) What is the role of public and the private resources for education ? Are there complementarities or

substitutional effects in these flows ?
Is it possible to determine an optimum combination of public and private flows of resources for different levels of education ?

- 5) Are the resource flows to different levels and types of education in accordance with the overall plans of sectoral developments within education ? In other words, does first level education, which is a priority sector within education, receive adequate resources ? If the resources flow is not adequate then what are the socio-economic and political factors for the same and how to overcome these forces ?
- 6) Is the resource flow consistent with the goals of inter regional, inter community, inter gender, and inter caste group equity and equality ? Obviously, if the resources are not flowing in accordance with these objectives then even best plans would not succeed.

The studies received for the trend report consider some of the above questions.

The flow of resources to education would obviously depend upon under which management the educational institution functions. The private costs consisting of expenditures on books stationary, clothing transportation etc., are

also reported to be different for institutions under different managements (*Gupta S.C. 1990*). For teacher training institutions the private costs for hosteliars were substantially more than for the regular students. Studies of private expenditures on primary education in different districts of developed, medium developed and less developed states would be quite meaningful for policy making. However, many such comprehensive studies are not available. (*Rajaiah B. 1989*). Under the sponsorship of the Planning Commission, a multi-state study of private expenditures on education was conducted, which showed that private expenditures, by the parents and the students and also the private managements are too large to be overlooked, though they have not received the attention they deserve by the policy makers. (*P.R.Panchamukhi 1990*)

As against such micro studies for specific districts and the states Tilak briefly presents South Asian perspectives about alternative policies for the finance, control and delivery of basic education. (*Tilak 1994*). The study primarily focuses on some of the states in India. He rightly points out that even in the schools managed by the private sector government funding is substantial. In Uttar Pradesh for example, 92 per cent of total government expenditure on primary education was made on private aided primary schools in the form of grants. In 1970 this percentage was as high as 99.4

in comparison with what was obtaining in 1950 with nearly 60 percent of government expenditure then being made on private aided schools. The latest position for 1980-81 shows that there has been a substantial increase in government assistance to the private managed educational development. The question whether public and private expenditures are mutually substitutive or complementary is a crucial issue. However, no conclusive studies are available on this issue in the Indian context.

How does the local government mobilise funds for financing education? Historically educational cess has been considered as a useful source of raising funds for education by the municipal bodies. The picture does not seem to be very encouraging now. For example, education cess in Baroda city contributed to the extent of 16 per cent of total revenue. Even though the educational cess makes such a significant contribution it was found that very little is spent on the development of the pupils particularly the fuller development of the personality of the child. This shows that the resource mobilisation by the local bodies for education is not in consonance with the objective of educational development (*Bhat M.A. 1989*).

While private costs indicate the costs to be incurred by the beneficiary the institutional costs indicate the costs to

be incurred by the suppliers of education. Institutional costs of university education (*S.K. Behara 1991*) have been rising continuously over the past few years. The case study for Utkal University brings home this point. It also shows that the examination costs are outstripping the other costs of higher education. Though these observations are made in the case of a University in a less developed state, the picture is not quite different in the case of other states. In the same way, what is observed in the case of the educationally most developed state of Kerala is relevant for the other states as well (*Mathew E.T. 1988*). The object wise analysis of educational expenditure for selected colleges in the state of Kerala over the period of time shows that 'salaries' is the most important head. In view of this predominance of salary very little flexibility is available for the colleges to introduce any innovative measures in higher education.

In the above background, it would be clear that the picture about the financial position of the institutions of higher education is extremely disappointing with the government almost giving up its initiative in view of its own financial crisis. It is in this background that the measure for rational restructuring of tuition and other fees with adequate safeguards to protect the interests of the students from the weaker sections, appears to be the only way out. Similar

is the conclusion for Maharashtra as well (*Roop M.R. and L.R. Thatte 1991*). With the help of unit cost calculations for higher education for different parts of Maharashtra, it was found that almost a three time hike in the tuition fees is the only way out for tackling the problem of resource crunch faced by the institutions of higher education. Even though, this order of fee hike may be politically problematic, the gravity of the financial crisis of higher education cannot be understated. The financial problems are not peculiar only to the un aided institutions of education. There is no significant difference in the number of financial problems faced by the aided and un aided institutions. The paucity of funds for un aided institutions may even lead to malpractices and unhealthy and undemocratic relationship among teachers and students, as a study in the context of Bombay has shown (*S.U.D'Leema 1988*).

In the background of such a picture about financial resources the studies also suggest that there is a need to have innovative approaches with regard to identification of areas of cost saving and also newer sources of funds for education. Use of the low cost material like plastic bags, plastic disposable syringes and assorted materials such as news papers, plastic and glass jars and bottles and stoppers etc., to teach plant physiology and micro biology in the rural schools is

one way of making best use of the available local resources for education (*Bhattacharya S. 1991*).

The utilization of the facilities within the educational institutions is also far from being optimum. A statewide study of the utilisation of the laboratory facilities in selected states (*K.N.Rao, M.K. Gupta 1990*) shows that the costly laboratories are used for a very short period of one to three hours per week by the majority of urban schools in Maharashtra ! .In the rural areas the position is still worse. In a less developed stste of Rajasthan where *larger percentage of the rural schools had the laboratory facilities as compared to the urban schools*, the utilisation of the available facilities is not very satisfactory either. While thus on the one hand there is a problem of inadequacy of physical facilities, on the other hand, there is a problem of less efficient utilisation of the available facilities. A study for Tamil Nadu (*Packkiamm 1990*) showed that even for an educationally developed state of Tamil Nadu as many as 83 per cent of primary schools did not have adequate facilities. The operation blackboard in such a context would be quite a meaningful reform measure. The implementation of the operation blackboard showed that the implementation is very satisfactory in the case of private primary schools as compared to government primary schools. This is a highly anomolous position. Not

all the components of the operation blackboard have been religiously implemented in the context of different states. A departmental study (*B.K. Gupta and D. Gupta 1992*) showed that universalisation of elementary education would be better facilitated if added attention is given to drinking water, toilet facilities, provision of women teachers in primary schools, replacement of the consumables at quick intervals, authority and freedom for the teachers and other functionaries, shift from teacher centred mode of teaching to child centred mode of teaching etc.. The study also showed that both the education officers and the teachers were confident that the operation blackboard facilities would certainly result in increased enrolment, improved retention and achievement levels of students. Thus, for UEE adequate supply of physical resources was considered as equally important like the supply of financial resources. However, the question of internal efficiency in the use of resources is equally important like the supply of financial resources.

The problems of wastage and stagnation add to the inefficiencies arising out of wrong management of physical and financial resources.

The problems of financing of education assume a different significance in a federal framework. The apex bodies responsible for resource flows in this

framework have not been able to pay special attention to the problems of the social sector in general and of education in particular. (*P.R.Panchamukhi 1989 Economics of Educational Finances Himalaya Publication*)

The other issues which deserve attention in this connection are the community resources for education particularly for primary education, the extent of under utilization of resources, size cost relationships at different levels of education, etc. Foreign funding of education may also be one of the crucial themes in the years to come in view of the recent developments of economic reforms and opening up. A study for Sambalpur district of Orissa, for example, (*Padhan A. 1990*) showed that an average 31 per cent of resources were wasted due to dropout and stagnation of children. This highlights the importance of controlling wastage and stagnation in education from the point of view of reducing the costs of education.

V.CONCLUDING OBSERVATIONS:

Economics of Education has emerged as an important sub- discipline in social sciences (-of education or economics ?). While few economists have paid attention to the economic aspects of education, several non-economist researchers have tried to highlight the importance of economic variables in their educational studies. It is necessary that

larger number of technical economists in particular and social scientists, in general, have to take interest in the problems of educational development in order to strengthen the foundations of the new discipline.

The researchers in economics of education face a number of problems in their research pursuits: (a) In view of less vigorous research efforts in this field young researchers do not get opportunities for peer group interactions or guidance from the senior researchers. This is observed in the case of a number of universities. As a result, economics of education has continued to remain low in the priority for researchers (b) The data base for researches in economics of education is very weak. The recent official data on say, sectoral use of educated manpower, region-wise distribution of educated personnel, (e.g. data on medical doctor, in districts and states), latest expenditure data, level-wise, object wise and region wise, source-wise data about funds, etc are not available at all. While this is the unsatisfactory position about the macro level data, the vast data collected by different researchers at the microlevel, are not at all compiled systematically in one

place. The national and/or regional data archives for education, may be suggested as an urgent initiative to help researches in economics of education in particular. (c) There does not seem to be a forum for economists of education who can share their research experiences. In fact, the economists of education of the universities especially in social science departments, research institutions, colleges of education, specialized institutions like NIEPA, NCER & T, IAMR, etc. need to have a closer interaction, which at present, is missing. In the interest of development of the discipline of economics of education and also in the interest of making the research output as an input in policy making, such interactions are extremely necessary. The present trend report based mainly on the research abstracts got done, reflects the absence of such a coordination of the research efforts in economics of education in the country.

In sum, we may conclude that economics of education may be a good area for researches in future, if fresh initiatives and technical expertise are encouraged in both the fields of education and economics.

References

- Anasari, M.M. 1989.** *Economics of distance higher education. Independent study.* Association of Indian Universities. 5. (NR 1230)
- Mridula, 1991.** *Economics of Open Learning System - Comparative Cost of Higher Education through IGNOU,* Ph.D., Zakir Hussain Centre for Educational Studies, School of Social Sciences, Jawaharlal Nehru University, New Delhi.
- Reddy, Janardhana D. 1991.** *A study of certain factors related to persisters and drop outs of adult education centres.* Ph.D., Edu. Shri Venkateswara Univ. 29.
- Reddy, Subba P.V. 1991.** *A study of job satisfaction of adult education supervisors in Andhra Pradesh.* Ph.D., Edu. Sri (AVRR 1603).
- Bagira R. 1991.** *The impact of polyvalent education of Shramik Vidyapeetha on industrial workers.* Ph.D. Panjab University, Chandigarh.
- J.P. Bhasker and S. Thangasamy, 1990.** *A study of nonformal education programme for working children through video method.* M.Phil. MKU.
- Amenda, Sister M. 1991.** *A study of intelligence and achievement of children in relation to infant feeding practices and nutrition.* Ph.D., Home Sc., Patna University (14 (ii). (RPSi 0663)
- M.Vergheese Mary. 1991.** *A study of the Health Status of Primary School Pupils and its influence on achievement for framing a school health programme.* Ph.D. University of Kerala.
- Potdar, Rajkamal. S. 1989.** *Mobilising education to reinforce Primary Health Care through school Children as change agents and revitalising the school health programme to attain the ultimate goal, Health for all by 2000 A.D.,* Ph.D., Edu. Shreemati Nathibai Damodar Thackersey Women's Univ. 21.
- R. Mahapatra 1988.** *A socio-economic analysis of inter district educational disparity at school level in Orissa.* Ph.D. in Education. Regional College of Education, Bhubaneswar.
- C.Sahoo. 1990.** *A study of educational planning and finance Orissa (1951-66)* Ph.D. in Edn., Utkal University, Bhubaneswar.
- R.S.Britto. 1988.** *Sociology of Education: A case study.* Ph.D. Tata Institute of Social Sciences, Bombay.
- G.Chinnappan. 1987.** *Equalisation of educational opportunities.* Ph.D. dissertation. Centre for Educational Studies, Indian Institute of Education, Pune.
- Awasthi S.K. 1992.** *An Analytic study of equality in educational opportunities*

and its use by Minority Muslim Students in Bhopal. Ph.D. Barkatullah Vishwavidyalaya, Bhopal.

Brisht A.R. 1990. *Vocational stress in relation to socio-economic status and belongingness to weaker sections of society.* Education Department, Kumaun University Campus, Almora (U.P).

Devi C.B. 1991. *An investigation into relationship between language ability, ordinal position, habitation and parental income among deprived primary school students.* Ph.D., Psy. Patna Univ. 14 (ii) KCP 0519)

Yadav, A.J. 1992. *A study of hotel workers in Kolhapur District with a view to preparing the curriculum for their education* Ph.D., Edu. Shivaji Univ. 13.

Reddy, Reddappa M.C. 1988. *Special variations of literacy in Andhra Pradesh.* Ph.D., Adult Edu. Sri Venkateswar Uni. 29. (AVRR 1267).

Kumari, Pushpa B. 1992. *A study of the role of income generating activities in motivating the women learners of the Adult Education Centres of Kerala.* Ph.D., Edu. Univ. of Kerala. 29.

Pathak S.N. 1991. *Adult education and socio-economic development in Azamgarh District. Independent study.* Pandit Govind Ballabh Pant Institute of Studies in Rural Development, Lucknow. 29.

Sharma, B. 1990. *Role of adult education in socio-economic development of weaker sections in rural areas of Uttar Pradesh: A case study of rural areas of Allahabad District.* Independent study. Edu. Indian Institute for Development Studies and Research, Allahabad -29, ICSSR (RN 1235)

Rao, Gopi 1992. *A study of the impact of adult education programme on social uplift of women in rural areas of Madhya Pradesh.* Ph.D., Edu. Rani Durgawati Vishwavidyalaya. 29.

Chandel, N.P.S. 1992. *A cost effectiveness analysis of national adult education programme with special reference to the Seventh Five Year Plan,* Ph.D., Edu. Dayalbagh Educational Institute, Agri. 29 (GDST 0837).

Das, Manoranjan. 1990. *A study of the socio-economic problems in the implementation of the adult education programme in Assam.* Ph.D., Edu. Gauhati Univ. 29. (RD 0144).

Srivastava, Ranjana, 1990. *Rural manpower assessment and planning: educational needs for India's rural development.* Ph.D., Edu. Univ. of Delhi. 37., (RDM 1322)

Mathew M. Raju. 1990. *Allocation of resources in recently started University Libraries in developing countries with special references to some Indian*

- University Libraries*. Ph.D. University of Kerala.
- Kaul C.L. & J.K. Gupta 1990.** *A sample study of library facilities and their utilisation in four selected states.* Department of Measurement, Evaluation, Survey and Data Processing, N.C.E.R.T. New Delhi.
- Mittal S.C. & Kumar, Pushendra 1990.** *An intensive study of school buildings in secondary and higher secondary schools in favour of four selected states.* Department of Measurement, Evaluation, Survey, and Data Processing, N.C.E.R.T. New Delhi.
- Vyas J.C. 1991.** *A study of the implementation of institutional planning in Rajasthan. Independent study.* State Institute of Educational Research and Training Udaipur. 36.
- Mohitkar, P.M. 1991.** *A critical study of financial management and its implications on development of Agricultural Universities in Maharashtra.* Ph.D., Edu. Nagpur Univ. 37. (GPK 1624). Narulla & Naik. History of Education in India.
- Rajaiah B. 1989.** *Private investment in primary education a study in the District Warangal, A.P.* Educational Research and Innovation Committee (ERIC), National Council of Educational Research and Training (NCERT), New Delhi.
- Gupta S.C. 1990.** *Education as a factor of Social Adjustment of Adolescent Girls across Different Levels of Socio-Economic Status.* Punjab Univ. Chandigarh.
- Jandhyala B.G. Tilak. 1994.** *Educational Research - Alternative Policies for the Finance, Control, and Delivery of Basic Education.* National Institute of Educational Planning and Administration, New Delhi.
- Bhat M.A. 1989.** *A study of funding pattern in education with special reference to educational cess paid by the citizens of Baroda city and its utilization for the development of primary schools run by the Baroda Municipal Corporation.* M.S.Univ. Baroda.
- Behera, S.K. 1991.** *A Study of the Institutional Costs of University Education.* Ravenshaw College, Cuttack.
- Mathew, E.T. 1988.** *A study on the financing of college education in the private sector in Kerala.* University of Kerala.
- Kurun, M.R. and Thatte, L.R. 1991.** *Pricing higher education: A case study of Maharashtra.* Vaze Research Group, Kelkar Education Trust's V.G. Vaze College of Arts. Science and Commerce. Bombay.

- D'Leema, S.U. 1988.** A study of financial problems of unaided recognised secondary schools and aided recognised secondary schools of north-west Bombay in relation to their academic performance. Ph.D. thesis. Bombay University, Bombay.
- Bhattachacharya, S. 1991.** *Development of plant based experiments for secondary and higher secondary levels using environment and local resources.* Regional College of Education, Bhubaneswar.
- Rao, K.N. & Gupta, M.K. 1990.** *Study of science laboratories in secondary and higher secondary schools in selected states.* Department of Measurement, Evaluation, Survey, and Data Processing, N.C.E.R.T. New Delhi.
- Gupta, R.K. and Gupta, D. 1992.** *A study of the Extent of Utilisation of Materials Supplied under Operation Blackboard Scheme.* (A Report of the First Phase). N.C.E.R.T. New Delhi.
- Panchamukhi P.R. 1989.** *Economics of Educational Finances Himalaya.* Indian Institute of Education. Pune.
- Pradhan, A. 1990.** *An input and output analysis of Primary Education in Sambalpur District of Orissa during 1975-1988.* PGTD, Nagpur University, Nagpur.
- Panchamukhi P.R. Cost benefit analysis of education: Mith and Reality of theory and practice** (NIEPA Journal).
- Kothari V.N. 1991.** *Human Issue in Human Capital Theory and Human Resource Development Analysis.* Himalaya Publishing House.
- Sodhi, Harleen. 1992.** *Impact of adult education programme on the attitude of rural women towards small family norms in relation to their age religion, family types and socio-economic status.* Ph.D., Edu. Panjabi University. 32. (AK 1717).
- Sodhi T.S. & Multani, Nishan Singh 1990.** *Rural and urban middle-aged Scheduled Caste parents: Their attitude towards the population problem.* Indian Educational Review, Vol 25 (1), 114- 116. 32. (Spr 1491).
- Reddy C. Chandra 1988.** *The impact of formal education on agricultural income in Andhra Pradesh.* Ph.D. B-193, Ravindranagar, Habsiguda, Hyderabad-7.
- D.P. Choudari 1968.** *Education and Agricultural Productivity.* Ph.D. thesis. Delhi University.
- Hebbare V.N. 1989.** *Economic value of education: a case study of electronics and electrical industry in Pune metropolitan city.* M.Phil dissertation. Centre for Educational Studies, Indian Institute of Education, Pune.

- Usha, P. 1992.** *A study of certain socio-familial correlates of secondary school science achievement* Ph.D., Edu., Univ. of Calicut. 38. (KSP 1632).
- Trivedi, Vineeta, 1988.** *A study of the relationship of parental attitude, socio-economic background and feelings of security among the intermediate students and their academic achievement.* Ph.D., Edu. Univ. of Lucknow. 38. (RJS 0683).
- Sahay, N 1991.** *Familial correlates of academic achievement in rural Hindu school students.* Ph.D., Psy. Ranchi Uni. 38. (SS 0770)
- Ramaswamy R. 1988.** *An inquiry into the correlates of achievement.* Ph.D., Edu. South Gujarath Univ. 38. (US 1848).
- Muthumanickam, R. 1992.** *A Study of academic achievement of students of higher secondary commerce group in relation to their reasoning ability, socio-economic status and interest in commerce.* M.Phil, Edu. Annamalai Univ. 38. (MDa 1329).
- Indra. 1991.** *A study of the relation of social class, religion, family-size and birth order to academic achievement of high school students.* Ph.D., Edu. Agra Univ. 38. (Mda 1329).
- Harikrishnan, M. 1992.** *A study of academic achievement of the students of the higher secondary stage in relation to achievement motivation and socio-economic status.* M.Phil., Edu. Annamalai Univ. 38. (MDa 0989).
- Garg, Chitra, 1992.** *A Study of family relations, socio-economic status, intelligence and adjustment of failed high school students.* Ph.D., Edu. Hemvati Nandan Bahuguna Garwal Univ. 38. (KBB 0545) .
- Ganguly, Malabika. 1989.** *Socio-economic status and scholastic achievement.* *Indian Educational Review.* Vol 24 (1), 84-94. 38. (Spr 1518).
- Ganguly, Malabika. 1989.** *A study of the determinants of scholastic achievement in rural and urban area.* Ph.D., Edu. Visva - Bharati. 38 (AS 1650).
- Devaneshan, Paul P. 1990.** *Socio-economic status, achievement motivation and scholastic achievement of higher secondary students in Pasumpon Thevar Thirumagan District.* M.Phil., Edu. (SM-1763).
- Yeole, C.M. 1990.** *A study of behaviour problems and certain demographic variables of adolescents in relation to their academic achievement.* Ph.D., Edu. Shivaji Univ. 38. (CMY 0897).
- Seethamony, D. 1988.** *Familial and social factors associated with*

- underachievement in school subjects.* Ph.D.Edu.Univ. of Kerala 38. (VR 1665).
- Anil Saraswat 1988.** *A differential study of achievement, motivation, occupational aspiration and academic achievement of adolescents in different types of school climate in Aligarh District.* Ph.D. D.S. College, Aligarh.
- Robert & G. Pankajam. M. Phil. MKU. 1988.**
- Laxmi Srivastava, 1988,** *A study of the influence of some variation (Academic achievement personality, socio-economic status) on virational development.*
- Verma B.P. and R.L. Nayak 1990.** *Effect of Socio-economic Stratification on Alienation of Rural Adolescents.* Himachal Pradesh University, Shimla.
- Verma B.P. and Asha Tiku 1990.** *Learning styles of High school students: effects of socio-economic status and general intelligence.* Himachal Pradesh University, Shimla .
- Srilatha G. 1988.** *Mother - child interaction during preschool age in different socio-economic status groups.* M.Phil Sri Venkateshwara University, Tirupati.
- Sharma, Ranjana, 1992.** *Pre-school education: A comparative study of aided and unaided pre-schools in Pune city.* M.Phil., Edu. Indian Institute of Education, Pune. 14 (1).
- Chavare, D.S. 1991.** *The problem of students dropping out of primary schools of the Pune municipal corporation .* M.Phil., Soc. Sc. Tilak Maharashtra Vidyapeeth 14 (ii).
- P.K. Rastogi. and Gupta M.K. 1989.** *Stagnation and dropouts at primary stage in nine educationally backward states.*
- Gupta J.K. and Srivastava A.B.L. 1989.** *Sample study of stagnation and dropout at primary stage in the educationally backward states.* Independent Study. DMES & DP, NCERT, New Delhi.
- J.C.Vyas & Others 1992.** *Pupils' dropout at primary stage in the state of Rajasthan.* Independent study. State Institute of Educational Research and Training and Training, Rajasthan, Udaipur.
- Gyaneshwar Singh, S. 1992.** *A study into the extent of stay on and drop-out in the school of Manipur.* Dept. of Education, D.M.College of Arts and Commerce, Imphal.
- Yadhav, Bhupendra Singh. 1991.** *A study of causal factors of dropouts among the socio-economically deprived elementary school students in Haryana.* Ph.D., Edu. Kurukshetra Univ. 14 (ii). (CLK. 0326).

- Rawat G.S, 1987.** *A study of Absenteeism in Junior High school in relation to school climate, social development, socio-economic status and academic achievement.* Ph.D. Kumaon University, National (U.P).
- Pathy M.K. 1990** *A study of the secondary school drop-outs of Sambalpur district.* Ph.D. in Education. Utkal University. Bhubaneswar.
- Nayal Gopal Singh & Nayal, Shanti. 1989.** *Differential Personality Profiles of High School Dropouts and Stayins.* Independent study. Kumaon University, Almora.
- Gurav Hiroji Krishnaji 1989.** *A study of wastage and stagnation of the students at college level with special reference to shivaji University area.* Ph.D. dissertation, Shivaji University. Kolhapur.
- SailabalaDebi 1992.** *The problems of education of women in a developing state: An economic analysis of the case of Orissa.* Independent Study. Dept. of Analytical & Applied Economics, Utkal University, Bhubaneswar.
- Ghose S.C. 1989.** *Politicization of Educational Institutions: The Role of Teachers.* Independent paper. Kalyaniganj College, North Bengal University, West Bengal.
- Mohitkar P.M. 1991.** *A critical study of financial management and its implications on development of agricultural universities in Maharashtra.* P.G. Dept. Nagpur University. Nagpur.
- Bhartrahari (of 10th - 11th Century AD) Sanskrit Poet.
- Panchamukhi P.R.** *Cost Benefit Analysis of Education; Myth & Reality of Theory and Practice* (NIEPA Journal), National Institution of Educational Planning and Administration, New Delhi.
- Subrameniyam P. 1990,** *Socio Economic Status of Students of Polytechnic and the Attitude towards Manual Jobs.* Department of Education, Madurai Kamaraj University.
- Reddy Venkataramana A. 1989,** An evaluation of the non-detention system from different angles. Department of Education, Srivenkateshwara University, Tirupati.
- Education Commission (1964-66),** Government of India, New Delhi.
- Goutam Renu, 1990,** *A study of success in distance learning system in relation to some key learner and institutional variables.* Department of Education, K.U. Kurukshetra.

- Raju M.M., 1990** *Allocation of resources in recently started University Libraries in developing countries with special reference to some Indian University Libraries*, University of Kerala.
- Misra A. 1989**, *A study of the teacher education programme at the primary level*. Ph.D., Education, Utkal University (14 (ii) (KCP 0823).
- Mishra A. 1992**. *A study on the development of girls education programme at primary level*. Ph.D., Education, Utkal University, 14 (ii), (KCP 0823).
- Pakkiam M. 1990**. *A study of Operation Blackboard scheme implemented in Sakkottai Panchayat Union*, Pasumpon Thevar Thirumagan District, Alagappa University, Karaikudi, Tamil Nadu.
- Narulla (Syed) and Naik (J.P), 1974**, *Student History of Education in India*. Macmillan Co., of India, Delhi.
- Panchamukhi P.R., 1989**, *Economics of Educational Finances*, Himalaya, Indian Institute of Education, Pune.
- Robert G.C. Pankajam G. 1989** *A study of Socio-economic Status and Vocational Choice of Students*, M.Phil. MKU.
- Rastogi P.K. & Gupta M.K. 1989**. *Stagnation and Dropouts at Primary Stage in Nine Educationally backward states*. Department of Measurement, Evaluation, Survy and Data Processing, National Council of Educational Research & Training, (NCERT), New Delhi- 110 016.